

SYSTEM **P**LANNING & **A**NALYSIS **R**eport

S-117

T. H. 49

SOUTH JCT. T. H. 55
TO MARIE AVENUE

S. P. 1917-13

NOVEMBER, 1972

PREPARED BY
OFFICE OF SYSTEM PLANNING



**MINNESOTA
DEPARTMENT
OF HIGHWAYS**

DEPARTMENT HIGHWAY-Statewide Planning Section
Room 807 - Ext. 3158

Office Memorandum

TO : Paul G. Velz
Road Design Engineer

DATE: November 9, 1972

FROM : Morris Gildemeister, Chief
Statewide Planning Section

SUBJECT: T.H. 49, South Jct. T.H. 55 to Marie Ave., S.P. 1917-13,
System Planning & Analysis Report S-117

This report is in response to R.D. McAtee's June 19, 1972 request for 1995 ADT & HCADT for the project location as shown on the map on page 2.

For each segment numbered on the map on page 3, the vehicle type distribution is tabulated on pages 4-10. The basic data, method, and assumptions are presented on page 11.

Segment 26 has the highest 1995 ADT on the project. It is 54,870. The 1970 ADT at this point is 3800.

Morris Gildemeister

Morris Gildemeister, Chief
Statewide Planning Section

CD

STATE OF MINNESOTA
DEPARTMENT OF HIGHWAYS
WORK MAP



TRAFFIC ESTIMATE DATA

DESIGN YEAR 1995 PART 1 OF 7

FOR

T.H. 49 S.P. 1917-13 LENGTH - MILESCOUNTY Dakota LOCATION S. Jct. T.H. 55 To Marie Ave.

BASED ON

1995 ADT FROM TRAFFIC ANALYSIS UNIT

SHOWING

TOTAL ADT ON SEGMENTS 1 THROUGH 11 AS

DEFINED ON ATTACHED INDEX MAP.

VEHICLE * TYPE	SEGMENT NUMBER										
	1	2	3	4	5	6	7	8	9	10	11
0	20820	902	2470	5046	3478	23396	3694	3254	34536	44372	7650
1	668	20	52	130	98	746	94	86	1020	1342	260
2	314	4	14	58	48	358	36	34	382	558	124
3	276	2	8	52	46	320	8	8	90	386	26
4	206	4	12	44	36	238	38	34	446	446	170
5	402	6	16	74	64	460	42	38	484	692	190
6	74	2	8	16	10	82	18	16	222	224	40
TOTAL ADT	22760	940	2580	5420	3780	25600	3930	3470	37180	48020	8460
TOTAL H. COMM. ADT	1940	38	110	374	302	2204	236	216	2644	3648	810
TOTAL DHV											
DIRECTIONAL DISTRIBUTION											

* VEHICLE TYPE CODE

0 = PASSENGER CARS AND 4 TIRE TRUCKS
 1 = SINGLE UNIT-2 AXLE-6 TIRE TRUCKS
 2 = SINGLE UNIT-3 AXLE TRUCKS
 3 = TRACTOR-TRUCK OR SEMI-TRAILER- 3 AXLES
 4 = TRACTOR-TRUCK OR SEMI-TRAILER - 4 AXLES
 5 = TRACTOR-TRUCK OR SEMI-TRAILER - 5 AXLES
 6 = BUSES AND TRUCKS WITH TRAILERS

TRAFFIC ESTIMATE DATA

DESIGN YEAR 1995 PART 2 OF 7

FOR

T.H. 49 S.P. 1917-13 LENGTH - MILESCOUNTY Dakota LOCATION S. Jct. T.H. 55 To Marie Ave.

BASED ON

1995 ADT FROM TRAFFIC ANALYSIS UNIT

SHOWING

TOTAL ADT ON SEGMENTS 12 THROUGH 22 AS

DEFINED ON ATTACHED INDEX MAP.

VEHICLE * TYPE	SEGMENT NUMBER										
	12	13	14	15	16	17	18	19	20	21	22
0	17926	42024	24816	17208	1342	30276	794	29980	47730	956	1558
1	590	1416	856	560	74	1656	40	1638	2222	50	82
2	302	714	550	164	16	434	10	430	602	8	30
3	322	652	516	136	1	147	1	147	284	2	4
4	174	510	360	150	1	179	1	179	330	2	4
5	402	972	724	248	2	272	2	272	522	2	6
6	44	132	28	104	4	106	2	104	210	10	16
TOTAL ADT	19760	46420	27850	18570	1440	33070	850	32750	51900	1030	1700
TOTAL H. COMM. ADT	1834	4396	3034	1362	98	2794	56	2770	4170	74	142
TOTAL DHV											
DIRECTIONAL DISTRIBUTION											

* VEHICLE TYPE CODE

0 = PASSENGER CARS AND 4 TIRE TRUCKS
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 2 = SINGLE UNIT-3 AXLE TRUCKS
 3 = TRACTOR-TRUCK OR SEMI-TRAILER- 3 AXLES
 4 = TRACTOR-TRUCK OR SEMI-TRAILER - 4 AXLES
 5 = TRACTOR-TRUCK OR SEMI-TRAILER - 5 AXLES
 6 = BUSES AND TRUCKS WITH TRAILERS

TRAFFIC ESTIMATE DATA

DESIGN YEAR 1995 PART 3 OF 7

FOR

T.H. 49 S.P. 1917-13 LENGTH - MILES
COUNTY Dakota LOCATION S. Jct. T.H. 55 To Marie Ave.

BASED ON

1995 ADT FROM TRAFFIC ANALYSIS UNIT

SHOWING

TOTAL ADT ON SEGMENTS 23 THROUGH 33 AS
DEFINED ON ATTACHED INDEX MAP.

VEHICLE # TYPE	SEGMENT NUMBER											
	23	24	25	26	27	28	29	30	31	32	33	
0	3340	1432	2258	50464	13917	3815	18220	7049	4303	3234	40269	
1	176	72	116	2360	630	170	860	314	230	144	1934	
2	28	28	18	640	154	68	242	128	88	60	566	
3	6	4	4	290	82	8	92	14	10	6	216	
4	10	4	8	340	90	16	108	30	18	14	266	
5	12	6	10	536	148	28	182	52	34	24	418	
6	38	14	26	240	44	20	66	38	22	18	216	
TOTAL ADT	3610	1560	2440	54870	15065	4125	19770	7625	4705	3500	43885	
TOTAL H. COMM. ADT	270	128	182	4406	1148	310	1550	576	402	266	3616	
TOTAL DHV												
DIRECTIONAL DISTRIBUTION												

* VEHICLE TYPE CODE

0 = PASSENGER CARS AND 4 TIRE TRUCKS
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2 = SINGLE UNIT-3 AXLE TRUCKS
3 = TRACTOR-TRUCK OR SEMI-TRAILER- 3 AXLES
4 = TRACTOR-TRUCK OR SEMI-TRAILER - 4 AXLES
5 = TRACTOR-TRUCK OR SEMI-TRAILER - 5 AXLES
6 = BUSES AND TRUCKS WITH TRAILERS

TRAFFIC ESTIMATE DATA

DESIGN YEAR 1995 PART 4 OF 7

FOR

T.H. 49 S.P. 1917-13 LENGTH - MILES
COUNTY Dakota LOCATION S. Jct. T.H. 55 To Marie Ave.

BASED ON

1995 ADT FROM TRAFFIC ANALYSIS UNIT

SHOWING

TOTAL ADT ON SEGMENTS 34 THROUGH 44 AS
DEFINED ON ATTACHED INDEX MAP.

VEHICLE # TYPE	SEGMENT NUMBER											
	34	35	36	37	38	39	40	41	42	43	44	
0	11469	20686	11076	30074	1828	19342	9690	28954	2500	4250	15654	
1	320	630	240	1508	44	906	248	1156	60	106	724	
2	188	460	166	492	14	300	86	388	20	36	234	
3	22	96	24	142	2	76	8	82	2	2	68	
4	36	128	48	192	2	108	12	118	4	4	90	
5	110	440	210	300	4	176	22	198	6	10	136	
6	50	110	46	192	6	112	34	144	8	12	94	
TOTAL ADT	12195	22550	11810	32900	1900	21020	10100	31040	2600	4420	17000	
TOTAL H. COMM. ADT	726	1864	734	2826	72	1678	410	2086	100	170	1346	
TOTAL DHV												
DIRECTIONAL DISTRIBUTION												

* VEHICLE TYPE CODE

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2 = SINGLE UNIT-3 AXLE TRUCKS
3 = TRACTOR-TRUCK OR SEMI-TRAILER- 3 AXLES
4 = TRACTOR-TRUCK OR SEMI-TRAILER - 4 AXLES
5 = TRACTOR-TRUCK OR SEMI-TRAILER - 5 AXLES
6 = BUSES AND TRUCKS WITH TRAILERS

TRAFFIC ESTIMATE DATA

DESIGN YEAR 1995 PART 5 OF 7

FOR

T.H. 49 S.P. 1917-13 LENGTH - MILES
COUNTY Dakota LOCATION S. Jct. T.H. 55 To Marie Ave.

BASED ON

1995 ADT FROM TRAFFIC ANALYSIS UNIT

SHOWING

TOTAL ADT ON SEGMENTS 45 THROUGH 55 AS
DEFINED ON ATTACHED INDEX MAP

VEHICLE # TYPE	SEGMENT NUMBER										
	45	46	47	48	49	50	51	52	53	54	55
0	1536	1728	3648	3840	1152	1152	14694	1536	1728	3648	3840
1	38	42	96	100	30	30	704	38	42	96	100
2	12	14	30	32	10	10	228	12	14	30	32
3	2	2	2	2	-	-	64	2	2	2	2
4	2	2	4	4	2	2	90	2	2	4	4
5	4	4	8	8	2	2	132	4	4	8	8
6	6	8	12	14	4	4	88	6	8	12	14
TOTAL ADT	1600	1800	3800	4000	1200	1200	16000	1600	1800	3800	4000
TOTAL H. COMM. ADT	64	72	152	160	48	48	1306	64	72	152	160
TOTAL DHV											
DIRECTIONAL DISTRIBUTION											

* VEHICLE TYPE CODE

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1 = SINGLE UNIT-2 AXLE-6 TIRE TRUCKS
2 = SINGLE UNIT-3 AXLE TRUCKS
3 = TRACTOR-TRUCK OR SEMI-TRAILER- 3 AXLES
4 = TRACTOR-TRUCK OR SEMI-TRAILER - 4 AXLES
5 = TRACTOR-TRUCK OR SEMI-TRAILER - 5 AXLES
6 = BUSES AND TRUCKS WITH TRAILERS

TRAFFIC ESTIMATE DATA

DESIGN YEAR 1995 PART 6 OF 7

FOR

T.H. 49 S.P. 1917-13 LENGTH - MILES
COUNTY Dakota LOCATION S. Jct. T.H. 55 To Marie Ave.

BASED ON

1995 ADT FROM TRAFFIC ANALYSIS UNIT

SHOWING

TOTAL ADT ON SEGMENTS 56 THROUGH 66 AS
DEFINED ON ATTACHED INDEX MAP

VEHICLE # TYPE	SEGMENT NUMBER										
	56	57	58	59	60	61	62	63	64	65	66
0	1152	1152	13734	6103	2447	32598	25286	12106	380	1341	575
1	30	30	684	198	78	1290	1050	604	14	44	18
2	10	10	222	80	27	358	252	192	3	8	3
3	-	-	60	12	7	64	54	50	-	-	-
4	2	2	90	24	10	110	82	78	-	1	1
5	2	2	128	41	15	218	166	112	1	2	1
6	4	4	82	42	16	162	110	58	2	4	2
TOTAL ADT	1200	1200	15000	6500	2600	34800	27000	13200	400	1400	600
TOTAL H. COMM. ADT	48	48	1266	397	153	2202	1714	1094	20	59	25
TOTAL DHV											
DIRECTIONAL DISTRIBUTION											

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6 = BUSES AND TRUCKS WITH TRAILERS

TRAFFIC ESTIMATE DATA

DESIGN YEAR 1995 PART 7 OF 7

FOR

T.H. 49 S.P. 1917-13 LENGTH - MILES
COUNTY Dakota LOCATION S. Jct. T.H. 55 To Marie Ave.

BASED ON

1995 ADT FROM TRAFFIC ANALYSIS UNIT

SHOWING

TOTAL ADT ON SEGMENTS 67 THROUGH 71 AS
DEFINED ON ATTACHED INDEX MAP.

VEHICLE * TYPE	SEGMENT NUMBER										
	67	68	69	70	71						
0	12496	571	1914	766	12886						
1	612	20	62	24	620						
2	192	3	10	4	194						
3	50	1	2	1	50						
4	80	1	2	1	80						
5	112	2	4	2	112						
6	58	2	6	2	58						
TOTAL ADT	13600	600	2000	800	14000						
TOTAL H. COMM. ADT	1104	29	86	34	1114						
TOTAL DHV											
DIRECTIONAL DISTRIBUTION											

* VEHICLE TYPE CODE

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- 2 = SINGLE UNIT-3 AXLE TRUCKS
- 3 = TRACTOR-TRUCK OR SEMI-TRAILER- 3 AXLES
- 4 = TRACTOR-TRUCK OR SEMI-TRAILER - 4 AXLES
- 5 = TRACTOR-TRUCK OR SEMI-TRAILER - 5 AXLES
- 6 = BUSES AND TRUCKS WITH TRAILERS

Basic Data, Method & Assumption

SPAR M-107 contains the 1995 ADT used for this project.

The HCADT was obtained by projecting vehicle classification counts recorded in or near the study area to 1995 values by using a statewide vehicle type trend study. These values were then applied to the project.